

## REMARKS

This paper is intended to be a complete response to the above-identified Office Action. It is believed no fee is due. If fees are required, however, the Commissioner is authorized to deduct the necessary charges from Deposit Account 501922/278-0002US.

Claims 1, 5, 6, 9, 10, 22, 25 and 29 have been amended. Claims 3, 4, 7, 8 and 32-34 have been cancelled without prejudice. Accordingly, claims 1, 2, 5, 6 and 9-31 are currently pending in the instant patent application.

### Restriction Requirement

The Examiner alleges that "[b]ecause applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (M.P.E.P. 818.03(a))." Office Action at page 2.

This allegation is without merit. The Examiner apparently did not consider Assignee's prior response. Reply dated 22 March 2006, pages 2-3. Assignee did, in fact, point out with specificity where the Examiner's position was in error. This is all that is required under 37 C.F.R. 1.111 and 1.143 as well as M.P.E.P. 818, 818.03(a) and 818.03(d). Assignee's reply was a complete and *bona fide* attempt to advance the application. Accordingly, Assignee believes it has fulfilled all requirements to maintain its right to Petition for reconsideration of the Examiner's restriction requirement in accordance with 37 C.F.R. 1.144.

### Substitute Specification

Pursuant to 37 C.F.R. 1.211(b)(3), the Examiner is instructed to replace the specification as originally filed with the substitute specification accompanying this Reply. The substitute specification has been prepared in accordance with 37 C.F.R. 1.125 and contains no new matter. Specifically:

- Paragraphs 0014, 0015, 0016 and 0017 have been added to identify new figures 6-9.

- Substitute (original) specification at paragraphs 0021 and 0024 (0017 and 0020) have been amended to correct typographical errors as pointed out by the Examiner. Office Action at page 3.
- Substitute (original) specification at paragraph 0022 (0018) has been amended to conform to new FIG. 7. Support for this amendment can be found in the substitute (original) specification at paragraph 0022 (0018).
- Substitute (original) specification at paragraph 0024 (0020) has been amended to conform to new FIG. 6. Support for this amendment can be found in the substitute (original) specification at paragraph 0024 (0020).
- Substitute (original) specification at paragraph 0026 (0022) has been amended to conform to new FIG. 9. Support for this amendment can be found in the substitute (original) specification at paragraphs 0018 and 0026 (0014 and 0022).

A duplicate copy of the substitute specification – without markup – also accompanies this Reply and is provided for the convenience of the examiner.

### **Drawing Amendments**

Substitute drawing sheets and new drawing sheets are attached here pursuant to 37 C.F.R. 1.121(d). No new matter has been introduced in the drawings. Specifically,

- Replacement drawing sheet for FIG. 1 incorporates updated drawing page numbers, *i.e.*, from "1/3" to "1/5."
- Replacement drawing sheet for FIGS. 2-4 incorporates updated drawing page numbers, *i.e.*, from "2/3" to "2/5."
- Replacement drawing sheet for FIG. 5 incorporates updated drawing page numbers, *i.e.*, from "3/3" to "3/5." In addition, new drawing 5D has been added to show the shape of a aerofoil blade. Support for this drawing may be found in the substitute (original) specification at paragraph 0029 (0025).
- New drawing sheet for FIGS. 6 and 7 has been provided in accordance with 37 C.F.R. 1.83(a). Support for new FIG. 6 may be found in the substitute (original)

specification at paragraph 0024 (0020). Support for new FIG. 7 may be found in the substitute (original) specification at paragraph 0022 (0018).

- New drawing sheet for FIGS. 8 and 9 has been provided in accordance with 37 C.F.R. 1.83(a). Support for new FIG. 8 may be found in the substitute (original) specification at paragraph 0032 (0028) and in originally filed drawing figures 1-4. Support for new FIG. 9 may be found in the substitute (original) specification at paragraphs 0018 and 0026 (0014 and 0022).

### **Objections to the Specification**

The Examiner has objected to the specification for allegedly failing to provide proper antecedent basis for the claimed subject matter in accordance with 37 C.F.R. 1.75(d)(1) and M.P.E.P. 608.01(o). Specifically, the Examiner asserts that:

1. "Claim 2, which recites that the top plate comprises a surface having a substantially circular cross section, has no antecedent basis in the specification." Office Action at page 4.
  - The Examiner is wrong. Substitute (original) specification at paragraphs 0019 and 0032 (0015 and 0028) as well as Figures 1 and 2 explicitly show this claimed feature.
2. "Claim 6, which recites that the first plurality of fixed sized openings comprises hoses having substantially circular cross section, has no antecedent basis in the specification." Office Action at page 4.
  - The Examiner is wrong. Substitute (original) specification at paragraphs 0023 and 0028 (0019 and 0024) explicitly note this claimed feature.
3. "Claim 7, which recites that the first plurality of fixed sized openings comprises holes having a substantially non-circular cross section, has no antecedent basis in the specification." Office Action at page 4.
  - The Examiner is wrong. Substitute (original) specification at paragraphs 0023 and 0028 (0019 and 0024) explicitly note this claimed feature.

4. "Claim 9, which recites that the first and second plurality of fixed sized openings have substantially the same cross sectional shape, has no antecedent basis in the specification." Office Action at page 4.
  - The Examiner is wrong. Substitute (original) specification at paragraph (0020) and Figure 2 explicitly notes this claimed feature.
5. "Claim 10, line 2, which recites gear teeth on at least a portion of an outer edge of the lower plate, has no antecedent basis in the specification." Office Action at page 4.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0024 (0020) and Figure 2 (element 240) explicitly notes this claimed feature.
6. "Claim 11, which recites that the side wall is coupled at an approximately ninety degree angle relative to a stop surface of the top plate, has no antecedent basis in the specification." Office Action at page 4.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0020 (0016) explicitly notes this claimed feature.
7. "Claim 12, which recites that the partially enclosed volume comprises a substantially circular cross-section, has no antecedent basis in the specification." Office Action at page 4.
  - The Examiner is wrong. Substitute (original) specification at paragraphs 0019 (0015 - Figure 1) and 0027 (0023 - Figure 4) explicitly note this claimed feature.
8. "Claim 13, which recites that the blades are adapted to sweep out substantially all of the partially enclosed volume when in a first position, has no antecedent basis in the specification." Office Action at page 4.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0028 (0024) and Figure 5A explicitly note this claimed feature. See also the illustrative embodiment described in the substitute (original) specification at

paragraph 0031 (0027) – which sets forth dimensions for both the skirt and rotating blade – *e.g.*, elements 110 and 130 of Figure 1.

9. "Claim 15, which recites that the pitch adjustment means adjusts the pitch between approximately plus and minus 90 degrees, relative to the vertical position, has no antecedent basis in the specification." Office Action at page 5.
  - The Examiner is wrong. Substitute (original) specification at paragraphs 0027 and 0028 (0023 and 0024) as well as Figures 5A and 5B explicitly note this claimed feature.
10. "Claim 26, which recites that at least one of the top plate and side wall comprises a composite, has no antecedent basis in the specification." Office Action at page 5.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0020 (0016) explicitly notes this claimed feature.
11. "Claim 27, which recites that at least one of the top plate and side wall comprise a composite, has no antecedent basis in the specification." Office Action at page 5.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0020 (0016) explicitly notes this claimed feature.
12. "Claim 28, which recites that at least one of the top plate and side wall comprise a plastic, has no antecedent basis in the specification." Office Action at page 5.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0020 (0016) explicitly notes this claimed feature.
13. "Claim 30, which recites the vehicle comprising an automobile, has no antecedent basis in the specification." Office Action at page 5.
  - The Examiner is wrong. In substitute (original) specification at paragraph 0026 (0022) Assignee teaches that the claimed "multi-modal forced vortex device 100 ... [may be] ... coupled to a vehicle." Earlier, in substitute

(original) specification at paragraph 0018 (0014), Assignee describes the term "vehicle" in its ordinary sense – "those of ordinary skill in the art will recognize a multi-modal forced vortex device in accordance with the invention can be coupled to a rigid body during use (*e.g.*, a land, sea or aerial vehicle)." Thus, in light of the written description, one of ordinary skill in the art would understand and fully appreciate that the "automobile" (*i.e.*, a land vehicle) of claim 30 was fully supported by the specification as filed.

14. "Claim 32, lines 8-15 have no antecedent basis in the specification." Office Action at page 5.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0032 (0028) explicitly notes this claimed feature.
15. "Claim 33, which recites that the first and second plate comprise the same plate, has no antecedent basis in the specification." Office Action at page 5.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0032 (0028) explicitly notes this claimed feature ("two multi-modal forced vortex devices in accordance with the invention may be mounted back-to-back").
16. "Claim 34, which recites that the first and second rotating means comprises a single motor, has no antecedent basis in the specification." Office Action at page 5.
  - The Examiner is wrong. Substitute (original) specification at paragraph 0032 (0028) explicitly notes this claimed feature ("It will also be recognized that numerous devices may be connected together in any number of configurations, separated by varying horizontal and vertical distances from one another," emphasis added).

As noted above, each claimed embodiment is supported by the written description as filed. If it is the specific terms "substantially" and "at least" that the Examiner objects to, terms such as *substantially* and *at least* "are ubiquitous in patent

claims. Such usages, when serving reasonably to describe the claimed subject matter to those of skill in the field of the invention ... have been accepted in patent examination and upheld by the courts." *Andrew Corp. v. Gabriel Elec., Inc.*, 847 F.2d 819, 821 (Fed. Cir. 1988), *cert. denied*, 488 U.S. 927 (1988). *See also Playtex Prods., Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 907 (Fed. Cir. 2005) ("The term 'substantial' is a meaningful modifier implying 'approximate', rather than 'perfect'.").

It is further noted that Patent Office examination guidelines support Assignee's use of these terms in the context of the written description. "The fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph ... Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification." M.P.E.P. 2173.05(b) (internal citations omitted). Assignee states that, in light of the specification as filed, the noted terms of approximation would be readily understood by those of ordinary skill in the art.

In light of the above amendments and remarks, Assignee has addressed all of the Examiner's objections to the specification. Accordingly, Assignee requests the Examiner withdraw the above-identified objections.

### **Claim Objections**

The Examiner alleges that "should claim 24 be found allowable, claim 25 (the portion reciting that the rotating means is an electric motor) will be objected to under 37 C.F.R. 1.75 as being a substantial duplicate thereof." Office Action at page 5.

Dependent claim 25 has been amended.

### **Section 112 Formalities**

The Examiner has rejected claims 4-10 under 35 U.S.C. 112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter which the Assignee regards as the invention. Specifically, the Examiner asserts that:

Claim 4, line 2 cites, 'a first plurality of fixed size openings in the top plate.' This is contrary and ambiguous, because claim 1, from which claim 4 depends, recites in line 2 that the top plate comprises adjustable fluid passages. It is unclear how the openings can be fixed in claim 4 if they are state to be adjustable in claim 1, line 2. Claim 4, lines 6-7, claim 5, line 3, claim 6, line 1, claim 7, line 1, claim 8, line 1, and claim 9, line 1 are contrary and ambiguous for the same reason. Office Action at page 6.

Assignee's amendment to independent claim 1 is believed to render this rejection moot. Accordingly, Assignee requests the Examiner withdraw this rejection.

### **Allowable Subject Matter**

The Examiner has indicated that claims 4-10 "would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph ... and to include all of the limitations of the base claim and any intervening claims." Office Action at page 14.

The Examiner's rejections based on 35 U.S.C. 112 are believed to be completely addressed above. Independent claim 1 has been amended to incorporate the subject matter of allowed claim 4. Claims 5, 6, 9 and 10 have been amended to depend from independent claim 1. In addition, independent claim 29 has been amended to incorporate the subject matter originally filed claim 4 and is, therefore, believed to be allowable for at least the same reasons as currently amended independent claim 1.

Accordingly, claims 1, 2, 5, 6 and 9-31 are believed to be allowable in accordance with the Examiner's Office Action dated 6 June 2006.



### **CONCLUSIONS**

Reconsideration of pending claims 1, 2, 5, 6 and 9-31 in light of the above remarks and amendments is respectfully requested. If, after considering this reply, the Examiner believes that a telephone conference would be beneficial towards advancing this case to allowance, the Examiner is strongly encouraged to contact the undersigned attorney at the number listed.

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